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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/552,760	04/18/2000	Kirk B. Ashby	049581-P024US-10006096	3104

29053 7590 09/30/2003

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EXAMINER	
TRAN, PABLO N	
ART UNIT	**PAPER NUMBER**
2685	8

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/552,760	ASHBY ET AL.	
	Examiner	Art Unit	
	Pablo N Tran	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *34-37* is/are allowed.

6)☒ Claim(s) *1-4 and 8-33* is/are rejected.

7)☒ Claim(s) *5-7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 07/01/03 have been fully considered but they are not persuasive.

The Applicant's stated that "T*here are no suggestion to combine Applicant's Admitted Prior Art and Marshall*". In response to the Applicant's arguments, since both references disclosed an image rejection system, therefore it would have been obvious to one of ordinary skill in the art to provide a pair of single sideband mixers, as disclosed in *Marshall,* in place of the first and second mixers of *Applicant's Admitted Prior Art* in order to provide a lower inherent noise output signal while remove unwanted image signal.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4 and 8-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Applicant's Admitted Prior Art* in view of *Marshall* (4,696,055) and further in view of *Tomasz* (6,400,416).

As per claims 1-4,15-16, and 27-30, *Applicant's Admitted Prior Art* disclosed a method of providing a frequency translation circuit comprising an input signal (fig. 1/item IN) interface accepting a video bandwidth signal at a first frequency, an output signal (fig. 1/item OUT) interface passing said video bandwidth signal at a desire frequency, a first mixer (fig. 1/no. 121) circuit having a first input and a first output, wherein a signal provided to said first input is provided to said first output at an increased frequency; and a second mixer (fig. 3/no. 214) circuit having a second input and a second output, wherein said second mixer is coupled to said first mixer, and wherein a signal provided to said second input is provided to said second output at a decreased frequency (see *Applicant's Admitted Prior Art*, pg. 8/ln. 10-pg. 9/ln. 210).

Applicant's Admitted Prior Art does not specifically disclose that both the first and second mixers are single sideband mixers. However, such single sideband mixers are well known in the art, as disclosed by *Marshall* (fig. 2, 8, 12-13/no. 40, 46, 44, 50). Therefore, it would have been obvious to one of ordinary skill in the art to provide a pair of single sideband mixers, as disclosed in *Marshall,* in place of the first and second mixers of *Applicant's Admitted Prior Art* to provide a lower inherent noise output and remove unwanted image signal.

Furthermore, the modified system of *Applicant's Admitted Prior Art* do not disclosed that both mixers are disposed on a common IC substrated. However, such mixers disposed on a common IC substrated are well known in the art, as disclosed by *Tomasz* (fig. 2-5/no. 216). Therefore, it would have been obvious to one of ordinary skill in the art to have both mixers disposed on a single IC substrated, as disclosed in *Marshall,* to the modified system of *Applicant's Admitted Prior Art* to save space & cost.

As per claims 8-10 and 23, the modified system *Applicant's Admitted Prior Art* and *Tomasz* disclosed a signal amplitude manipulator disposed on a common IC substrated (see *Applicant's Admitted Prior Art*, fig. 1/no. 114, see *Tomasz*, fig. 3/no. 252, 256).

As per claims 11-13 and 24-25, the modified system *Applicant's Admitted Prior Art* and *Tomasz* disclosed a filter, coupled to said first single sideband mixer, is disposed on a common IC substrated (see *Applicant's Admitted Prior Art*, fig. 1/no. 141, see *Tomasz*, fig. 4/no. 210).

As per claim 14, the modified system *Applicant's Admitted Prior Art* and *Tomasz* disclosed a filter, coupled to said first single sideband mixer, is disposed external of the common IC substrated (see *Tomasz*, fig. 3/no. 210).

As per claims 17-19, the modified system *Applicant's Admitted Prior Art* and *Tomasz* disclosed the first sideband mixer comprises a phase shifter to provide an in-phase and quadrature signals (see *Marshall*, fig. 2/no. 54).

As per claim 20, the modified system *Applicant's Admitted Prior Art* and *Tomasz* disclosed an amplifier, coupled to said input, is disposed on a common IC substrated (see *Applicant's Admitted Prior Art*, fig. 1/no. 111, see *Tomasz*, fig. 3/no. 224).

As per claims 21-22, the modified system *Applicant's Admitted Prior Art* and *Tomasz* disclosed an amplifier, coupled to between said first and second mixers, is disposed on a common IC substrated (see *Applicant's Admitted Prior Art*, fig. 1/no. 111, see *Tomasz*, fig. 3/no. 224).

As per claim 26, the modified system *Applicant's Admitted Prior Art* and *Tomasz* disclosed said first mixer comprises a fixed frequency carrier and said second mixer comprises a variable frequency carrier (see *Applicant's Admitted Prior Art*, fig. 1/no. 131,132).

Allowable Subject Matter

4. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 34-37 are allowed.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rixon (5,243,304) disclose image rejection frequency circuit in a radiotelephone communication system.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (703)308-7941. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)305-4385.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

PABLO N. TRAN
PRIMARY EXAMINER

September 20, 2003